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Series

THE IRISH POTATO

BY
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EXCHANGE

Series

The benefits of education and of useful knowledge, generally diffused through a community, are essential to the preservation of a free government.

Sam Houston.

Cultivated mind is the guardian genius of democracy. . . . It is the only dictator that freemen acknowledge and the only security that freemen desire.

Mirabeau B. Lamar.

THE IRISH POTATO

The work outlined in these bulletins is intended to give suggestions and some definite direction for teaching children, both girls and boys, in the outlying rural districts something of the nature of food plants, their nutritive value and their proper preparation for human consumption. It is also desired that these lessons in cooking should be connected with the school lunches and that the children actually prepare daily a hot dish to supplement the cold food brought from home.

There are various ways in which this work can be placed on the school program. The subject dealt with can be divided into smaller topics, and one of these smaller divisions developed each day. Probably a better plan would be to devote Friday afternoon to the work. The subject-matter can be carefully discussed and followed by an actual cooking lesson. The following week the class should be divided into groups and each group serve for a day during the forenoon. This group will prepare and cook in quantities large enough to serve those contributing to the food supplies, some special dish discussed or prepared at the Friday class suitable for the noon luncheon. The time spent in this can be arranged during the study hours and the noon recess by the teacher, so that it will not conflict with the regular school program.

SUPPLIES

The food material can be brought from home by the children; some bringing flour, others bringing potatoes, still others butter and milk, etc. Frequently pupils, especially boys, will prefer to contribute money instead of food. This can be used to purchase staple supplies, which are always necessary, i. e., flour, sugar, salt, pepper, soap and washing powders for cleansing, etc. The boys can contribute their share of the labor by keeping up the fires, carrying and emptying water, etc. Every child should be encouraged to contribute something to these lunches so they may get the benefit of them.

Before introducing the work it is always best first to call a

meeting of the mothers, and the fathers, too, if they will come. Put the plan definitely before them; impress upon them the advantage of a hot, nutritious dish at the mid-day meal, and solicit their co-operation and support.

The equipment necessary for carrying out these cooking lessons is simple and inexpensive. A cupboard and table constructed from two store boxes are sufficient and suitable for holding utensils and supplies. The heating stove of the school can be utilized as a source of heat. The utensils necessary for carrying on this work are as follows:

COOKING EQUIPMENT FOR THE ONE-ROOM RURAL SCHOOL

Equipment No. 1

Used on common heating stove for *all* cooking except baking.

1 8-qt. kettle with bail and closely fitting lid.....	\$.80
1 3-pt. double boiler (graniteware).....	.85
1 1-qt. tin coffee pot.....	.20
1 No. 8 iron skillet.....	.35
1 wire strainer .....	.15
1 long-handled basting spoon (iron).....	.10
2 long-handled (graniteware) dippers.....	.30
1 long-handled fork .....	.10
1 tablespoon .....	.05
2 teaspoons .....	.05
1 case knife and fork.....	.10
1 paring knife .....	.10
1 combination corkscrew and can opener.....	.10
1 butcher knife .....	.50
1 tin measuring cup.....	.05
2 granite dishpans (one for rinsing).....	1.10
1½ dozen quart Mason jars.....	.40
1½ dozen jelly glasses.....	.15
1 candy bucket for fireless cooker.....	..
2 goods boxes (shoe boxes are well suited).....	..

Total.....\$5.45

COOKING EQUIPMENT FOR THE ONE-ROOM RURAL SCHOOL.

Equipment No. 2

(This added to No. 1 makes all cooking possible.)

1 2-burner wick oil stove.....	\$ 8.50
1 portable oven	3.50
1 bread board .....	.50
1 rolling pin .....	.10
1 dripping pan .....	.30
2 bread pans .....	.40
1 cake pan .....	.20
1 set layer cake.....	.30
1 earthen baking dish.....	.20
1 set muffin irons.....	.50
1 Dover egg beater.....	.10
1 flour sifter .....	.20
Total.....	<hr/> \$14.80

The simplest equipment costs little more than \$5.00 and can be easily gotten by any school anxious to do the work. The more expensive equipment costs but \$15.00 and is to be recommended, as it contains an oil stove with two burners, so that cooking could be done on days when it would be too warm to have a fire in the heating stove. Then, too, it contains a portable oven so that baking may be included in the cooking lessons. This broadens the scope of the lessons and also permits of greater variety in luncheon dishes.

The dishes necessary for serving hot food at luncheon can be brought from home, each child bringing a cup, plate, knife, fork, and spoon.

The lessons suggested for the first two weeks are a study of the Irish potato. The following references are suitable sources of material, both for the children and the teacher to work from: Bulletins No. 35, Potato Culture; No. 256, Preparation of Vegetables for the Table; No. 386, Potato Culture on Irrigated Farms of the West; No. 295, Potatoes and Other Root Crops as Foods; Minnesota Farmers' Library; Extension Bulletin No. 35, Potato

Diseases; Virginia Agricultural Experiment Station, No. 5, The Cultivation of Potatoes. Also the following books contain good material for the teacher's use: Food and Dietetics, Hutchinson; Theory and Practice of Cookery (page 228), Fisher & Williams.

SOME FACTS THE TEACHER SHOULD KNOW ABOUT THE POTATO

The potato is a starchy food, and besides starch contains much water, a little mineral matter and fiber. The children can easily feel and see the water, can see the thread-like walls and fibers running through the potato, that separates the starch as is described below. This starch is a fine, glistening substance heavier than water. It is the substance which makes the potato a valuable food, and to cook this starch well is to cook the potato well. Starch should be cooked in boiling water, and as the principal food in potato is starch, the potato also should be cooked in boiling water and salt added for seasoning.

The actual composition of the potato is as follows:

Water	78.3 per cent.
Protein	2.2 per cent.
Starch	18.1 per cent.
Mineral	1.0 per cent.
Fiber .....	.4 per cent.

This indicates that the food value of the vegetable is due to the starch and mineral present. Starch is of value to the human body in two ways: it gives heat to keep up the bodily temperature and furnishes energy to perform muscular work. The mineral is especially important in building bone.

The digestibility of the potato depends largely on the method of its preparation and the manner in which it is eaten. A mealy potato is more digestible than a soggy, waxy one. A potato which enters the stomach in a fine state of division is more digestible than one taken in large lumps. Through mastication these lumps are largely broken up and the potato mixed with the saliva, which aids in digestion.

Potatoes must by no means constitute the sole or even the

staple diet of man. They contain too little of muscle-building food to be used alone. It would take about 22 pounds of potato a day to yield enough of its muscle-building food, and that amount would furnish four times as much starch as a system can economically use.

The following is a suggestive plan for developing and relating this kind of work:

Teacher's aim:

1. To teach the child the best method of cooking starch.
2. To give the child a knowledge of the nutritive value of the potato and the best method of obtaining it.
3. To correlate the work with other subjects of the school curriculum with the end in view of placing home industries in the child's mind on the same educational basis as the other subjects in the curriculum.

Suggestions for correlation:

1. Geography.

- a. A map showing the potato producing centers of the world.
- b. A discussion of soil and climate adapted to the growth of the potato.
- c. The importance of the potato as a domestic agricultural product.

2. Nature study and gardening.

- a. Study of the methods and germination of the potato.
- b. Study of the methods of cultivation and harvesting of the potato.
- c. Study of the insects affecting the growth and development of the potato and how they may be destroyed.

3. English.

- a. The keeping of note-books by the pupils in which all subject-matter can be recorded and corrected.
- b. Stories connected with the discovery of the potato, early use of the potato, etc.

4. Spelling.

- a. Give new words connected with the development of the lesson.
- b. Definition of new words and the use of same.

5. Construction work.

- a. Suitable wooden crates or bins for storing the potato for winter use.
- b. Woven holders for handling hot pots and kettles during the cooking.
- c. Hemming of dish towels for use in dish washing.

The following suggest the method of the lesson on the potato with the children:

THE IRISH POTATO

What is it? How grown? How dug? What do you see on examining it? Cut and look inside; feel it. Look at it through a hand lens. Do you see any fibers? Do you see a heavy rim near the outside skin? What is it? What influence would this have on the way you peel the potato (the mineral salts of the potato are located near the outer skin)? Grate a potato into a cheesecloth, gather up the cloth, make a bag and squeeze it. Wash with the fingers carefully in a pan of cold water, being very careful not to break an opening in the bag. Allow the water to stand some minutes, pour it off carefully. What is in the bottom? Examine carefully. Mix a part of it with a little cold water and boil. What happens? This starch is the substance which makes the potato a good food. Remove the fibers from the cloth and dry in a little paste board box on the back of the stove or in the sunshine. Examine.

Do we eat potatoes raw? Why not? How shall we cook them? What substance have we here to cook (starch and fiber, but starch is the important one)? Try the effect of cold water on a little starch. Try hot water; boiling water. What happens in each case? Review these experiments carefully and see if they suggest to your mind the best method of cooking a potato. (Cook the potatoes if possible in the school room and utilize for school luncheon.)

The following recipes are suggested for suitable potato dishes for the children to prepare:

BOILED POTATOES

First select potatoes of uniform size. Wash, pare off the thinnest possible layer of skin and drop at once into cold water to

prevent them from becoming black. (If the potato is old and somewhat shrunken, soak for several hours before cooking.) Cook the potato in salted boiling water until soft, which is easily determined by piercing with a fork. (For a dozen potatoes allow one table spoon of salt and boiling water enough to cover.) When the potatoes are done, drain immediately, sprinkle with a little added salt and let stand uncovered in a hot place until serving time. If potatoes are boiled with their jackets on (this is an excellent method, as no mineral matter or protein is lost from the potato), first scrub them and then with a sharp knife cut a narrow band of skin from the center. This aids in removing the skin before the potato is eaten.

BAKED POTATOES

Select smooth, medium sized potatoes. Scrub with a small vegetable brush and bake in a hot oven for about forty minutes or until soft. Remove from the oven, break the skin slightly in order that the steam can escape and serve as quickly as possible. (Properly baked potatoes are more easily digested than potatoes cooked any other way. They are, however, better cooked in boiling water than baked in a slow oven.)

If there is no oven in the school room equipment the potato may be baked in an outdoor fire. For this purpose a pit is dug and a fire built in the pit. When the fire has burned well down, bury the potatoes in the ashes and allow them to bake for about forty-five minutes. They bake with less danger of burning if wrapped in damp clay or wet paper before being put into the fire.

RICED POTATOES

Force the hot boiled potatoes through a potato ricer or coarse strainer direct into a hot vegetable dish.

MASHED POTATOES

To five potatoes which have been broken with a potato masher or put through the ricer, add one tablespoon of butter, one teaspoon of salt, and one-half cup of hot milk. Beat this with a fork until creamy and pile lightly in a vegetable dish. Serve at once.

SCALLOPED POTATOES

Wash, pare, and slice potatoes into cold water. In a buttered dish, place a layer of these potatoes, sprinkle with salt and a little flour, dot over with one-half tablespoon of butter. Repeat this until the baking dish is nearly filled, then add hot milk until it may be seen through the top layer. Bake one and a quarter hours in a moderate oven or place back of the stove and cook slowly. The milk should not boil. A little grated cheese may be sprinkled over each layer if desired.

CREAMED POTATOES

For creamed potatoes, freshly cooked potatoes may be used or cold boiled potatoes. In each case the potatoes are cut into small cubes and served with a cream sauce. The cream sauce is made as follows: 2 tablespoons of butter, 2 tablespoons of flour, 1 cup of heated milk, $\frac{1}{2}$ teaspoon of salt. Melt butter, add flour and cook for two minutes. (Be careful that the butter does not brown or burn.) Add the heated milk and boil two minutes, stirring constantly. Add salt and reheat the potatoes in the cream sauce. Serve in a heated vegetable dish.

WALDORF POTATOES

Cut cold boiled potatoes into cubes and mix one cup of potatoes and one-half cup of cream sauce, having previously added four tablespoons of grated cheese. Pour over potatoes and heat slowly without boiling.

POTATO SOUP

Three potatoes, 1 quart of milk, 2 slices of onion, 3 tablespoons of butter, 2 tablespoons of flour, $1\frac{1}{2}$ teaspoon of salt. Cook potatoes in boiling water, to which the salt has been added. When soft, rice, mash, or run through a strainer. Scald the milk with onion, remove onion, add milk slowly to potatoes. Melt the butter, add the flour until well mixed, and stir into the boiling soup. Cook 1 minute and serve.

The following material may be used as reading material in this connection:

THE IRISH POTATO

The first home of the potato was in South America. There it was found wild. Sometimes we call it the white potato, that we may know it from the sweet potato. Often it is called the Irish potato. Do you know why? It is because the people of Ireland use so many potatoes. It was carried to Ireland from our own country over three hundred years ago. It is now the principal food among the peasants.

We found that potatoes contain a great deal of starch. Much of the starch we use comes from potatoes. This useful, homely, every-day vegetable is found in almost every country. It has been used in France for a long time.

Shall I tell you about what happened to the first potatoes eaten in France? Well, a long, long time ago the Spaniards came to South America. They noticed that the people ate, and almost lived upon, what they thought was the large root of a vegetable called "battata." Battata means "papa" in their language. The Spaniards sent some of the battata to their friends in Spain, and these friends sent them to Italy, another country near France. Finally some were sent to Belgium, to the mayor of Nons, which is almost in France.

The mayor liked the king of France very much and wanted to send him a rare gift. So what did he do but send him a whole sack of potatoes.

Henry II, king of France, invited the great lords and noblemen of his court to a feast. The potato was to be the important dish. When the potato appeared, the guests became very much excited. The king was the first to be served. He tasted it once, twice; then passed it on in perfect silence. The lords and noblemen did as he had done. What was the cause of the silence? The cook had not boiled them before serving them with a delicious mayonnaise dressing. After the feast, the king had every potato thrown out of the city of Paris.

About two weeks later some soldiers were camping near the fortifications of the city. While sitting around the campfire, it seemed to them as if a most appetizing odor came from the glowing ashes of the fire. They began to examine the ashes in order that they might find the cause of this tempting smell. What a

feast they had when at the end of the stick appeared one of the potatoes sent to the king of France. The soldiers ate them without the least fear, and they ate every one of them.

The news of this lucky find reached the ears of the king, so he sent for more potatoes and gave another feast.

The potato was served again, but was cooked this time, and the most particular guest could not find one word to say against it.

ANOTHER POTATO STORY

There are many stories told of what the potato has done for our own country.

Over a hundred years ago, our country was fighting against England. The American people wanted a government of their own, so that they could rule themselves. This was the Revolutionary War.

General Francis Marion was one of the bravest fighters on the American side. He and his soldiers lived in the thick forests of South Carolina.

One day the English general sent a young soldier into the woods to find General Marion and his army. Just at dark, when he thought he was lost he saw the campfires of the Americans gleaming through the trees. Riding up close to the fire where the soldiers could see him, he waved his white handkerchief. Seeing the white handkerchief, the soldiers knew that he was a messenger and did not shoot him. They directed him to the tent of General Marion. Here the Englishman found him seated on a log in the tent made of pine boughs. Leaping down from his horse, he said: "General Marion, I have a message for you from my general." Marion said: "I will hear your message after we have eaten."

Presently, several of the officers came into the tent and sat down on the logs. The Englishman looked all around for the table, but could find no sign of it. Soon a soldier came into the tent and said: "General Marion, supper is ready." He passed the plates. What do you think the plates were that the soldiers brought into camp? They were huge chips cut from a large tree near the campfire. The English soldier thought: "These are very funny plates. I wonder what the food will be." Another

soldier came in with some smoking-hot potatoes, just taken from the ashes of the campfire. The poor Englishman had been riding all day and was very hungry. How he did enjoy those baked potatoes. Again and again the soldier brought into the tent the hot potatoes, and the Englishman thought he had never eaten half so nice a meal.

When supper was over, the plates were placed in the fire instead of in a dishpan. While they sat watching the plates burn in the glowing fire, General Marion said to the Englishman: "You now see what we Americans have to eat here in the woods. But just as long as we have potatoes, so long will we continue to fight for our country." The Englishman then knew that money could not buy General Marion and his brave men. He was ashamed to tell General Marion that he had come out into the woods to get him to desert his country. He said: "General Marion, you are a brave man, and we can never conquer you as long as you and your soldiers have the potato for your friend. I shall return in the morning and tell my general that the potato is stronger than his gold."

In the morning the English soldier again ate baked potatoes, without salt or butter, on a wooden plate. He went back to his own country and never fought against America again.

General Marion, however, by the aid of the potato, continued to live in the dark, swampy forests of South Carolina. He fought so bravely that at last all the English were driven from the country.

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